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## Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

## Listing of Claims

1. (Currently Amended) A method of estimating a maintenance date for a tool based upon a parameter of the tool, comprising:

obtaining a difference between a detected value of the parameter and a maintenance value of the parameter;

determining whether the difference is less than or equal to a predefined value;

performing a maintenance procedure if the difference is less than or equal to the predefined value; and

estimating a maintenance date according to the difference and a variation value if the difference is greater than the predefined value, the variation value representing a change in the parameter per time unit and the maintenance date being stored to a maintenance schedule.

2. (Currently Amended) The method of claim 1, wherein the maintenance date is estimated by adding (a) a current date to (b) the difference divided by the variety value; and

the maintenance date is stored to a maintenance sehedule.

- (Original) The method of claim 1, wherein the variation value is determined by a statistical method.
- 4. (Original) The method of claim 1, wherein the variation value is calculated from stored data.

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- 5. (Original) The method of claim 4, wherein the variation value is calculated from data corresponding to detected values of the parameter which were obtained from the tool over a period of time prior to the estimating of a maintenance date.
- 6. (Original) The method of claim 5, wherein the obtaining, the determining and the performing are performed automatically.
- (Original) The method of claim 5, wherein the period of time is a plurality of days.
- 8. (Original) The method of claim 4, wherein the variation value is calculated from data obtained in previous maintenance date estimates.
- 9. (Original) The method of claim 1, wherein the variation value is calculated from data corresponding to detected values of the parameter which were obtained from the tool over a period of time.
- 10. (Original) The method of claim 1, wherein the variation value is calculated from data immediately inputted by a user.
- 11. (Original) The method of claim 1, wherein the variation value is calculated from stored data and data immediately inputted by a user.
- 12. (Currently Amended) A method for estimating a maintenance date for a tool, comprising:

obtaining a plurality of differences between a plurality of detected values of a plurality of parameters of the tool and a plurality of maintenance values of the parameters;

determining whether each difference is less than or equal to a corresponding predefined value for each parameter;

performing a maintenance procedure if a predetermined number of the differences are less than or equal to their corresponding predefined values; and

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estimating a maintenance date according to the differences and a plurality of variation values for each parameter if the predetermined number of the differences are not less than or equal to their corresponding predefined values;

wherein each variation value represents a change in a corresponding one of the parameters per time unit for the tool; and

wherein the maintenance date is stored to a maintenance schedule.

- 13. (Original) The method of claim 12, wherein the predetermined number is equal to one; and the maintenance date is stored to a maintenance schedule.
- 14. (Original) The method of claim 12, wherein each variation value is calculated from data corresponding to detected values of the corresponding parameters which were obtained from the tool over a period of time prior to the estimating of a maintenance date.
- 15. (Original) The method of claim 14, wherein the variation values are calculated from stored data.
- 16. (Original) The method of claim 14, wherein the period of time is a plurality of days.
- 17. (Original) The method of claim 12, wherein the variation values are calculated from data immediately inputted by users.
- 18. (Original) The method of claim 12, wherein the variation values are determined by a statistical method.
- 19. (Original) The method of claim 12, wherein each of the variation values represents a change of the corresponding parameter per time unit.

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- 20. (Currently Amended) An apparatus for estimating a maintenance date for a tool, comprising:
- a database comprising a variation value that represents a change of a parameter of the tool per time unit; and
- a controller operatively connected to the database and configured to estimate the a maintenance date for the tool according to a variation value and a difference between a detected value of the parameter and a maintenance value of the parameter, the maintenance date being stored to a maintenance schedule;

wherein the controller is configured to provide a recommendation that a maintenance procedure be performed on the tool when the difference is less than or equal to a predefined value.

- 21. (Original) The apparatus of claim 20, wherein the apparatus further comprises a connection unit, which is connected between the tool and the apparatus and which is configured to obtain the detected value of the parameter from the tool.
- 22. (Original) The apparatus of claim 21, wherein the apparatus further comprises a fab information master equipment information master unit connected to the controller to store the maintenance date to the maintenance schedule.
- 23. (Original) The apparatus of claim 20, wherein the controller is configured to estimate the maintenance date for the tool according to a plurality of variation values and a plurality of differences between a plurality of maintenance values of the parameters and a plurality of detected values of the parameters.